

## **REMARKS**

### **A. Status of Claims and Amendments**

Favorable reconsideration of this application as presently amended is respectfully requested. Claims 1, 3 through 5, 7, 12, 14 through 20, 22 through 26, 28 through 34 and 36 through 39 are pending. Claims 2, 6, 8, 21, 27, and 35 have been canceled. Claims 9 through 11, 13, 19, 20, 22 through 26, 28 through 34, and 36 through 39 have been withdrawn as being drawn to non-elected species.

Claim 1 has been amended to recite a method comprising, after the surface activation step, the step of heating both said objects while the surfaces of both said objects are in contact, thereby covalently bonding both said objects to be bonded together. Support for these amendments to Claim 1 may be found, for example, in the first sentence of the last full paragraphs at page 27, FIG. 5 and the last two sentences of the first full paragraph at page 43, and the first sentence of the second full paragraph at page 45, of the present application. Claim 1 has also been amended to recite that said hydrophilic treatment is performed using oxygen as a reaction gas in said physical treatment step so that OH groups are attached to the surfaces of both said objects to be bonded.

### **B. Procedural Matters**

Applicant acknowledges, with thanks, the Examiner's clarification at page 7 of the Final Office Action (Final Action) regarding the status of pending Claims 9 through 11, 13, 19, 20, 22 through 26, 28 through 34, and 36 through 39 as being withdrawn from further consideration.

Applicant further acknowledges the Examiner's statement at page 7 of the Final Action that Applicant's previous arguments to pending Claims 1, 3 through 5, 7, 12 and 14 through 16 have been considered but are now moot in view of the new grounds of rejection presented at pages 2 through 6 of the Final Action.

### **C. Response to Rejection of Claims 1, 3 through 5, 7, 12, and 16 through 18 under 35 U.S.C. § 102(b) as Being Anticipated by Nagakubo et al. '953**

At pages 2 through 4 of the Final Action, pending Claims 1, 3 through 5, 7, 12, and 16 through 18 have been rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No.

5,421,953 (Nagakubo *et al.* '953). This rejection is respectfully traversed with respect to these Claims, as amended or as currently presented, for at least the following reasons.

Nagakubo *et al.* '953 does not teach or suggest the following features of amended Claim 1:

- a. after the surface activation step, the step of heating both said objects while the surfaces of both said objects are in contact. By contrast, the Final Action relies upon column 2, lines 19-22 of Nagakubo *et al.* '953<sup>1</sup> to allegedly teach that "the objects may be bonded together at room temperature without heating."<sup>2</sup> In other words, Nagakubo *et al.* '953 specifically teaches away from heating the objects after the surface activation step according to amended Claim 1.
- b. covalently bonding both said objects to be bonded together. By contrast, column 3, lines 28-33 of Nagakubo *et al.* '953<sup>3</sup> teaches bonding the bodies through hydrogen bonds between the hydroxide groups on the surface of at least one body and oxygen atoms present on the surface of the other body. Nowhere does Nagakubo *et al.* '953 teach covalently bonding of the bodies according to amended Claim 1. In addition, hydrogen bonding is not the equivalent of covalent bonding. In fact, by heating to form covalent bonds according to amended Claim 1, much stronger bond strength is achieved than may be obtained by hydrogen bonding as taught by Nagakubo *et al.* '953. Accordingly, Nagakubo *et al.* '953 does not teach or even suggest covalently bonding both objects according to amended Claim 1.
- c. said hydrophilic treatment is performed using oxygen as a reaction gas in said physical treatment so that OH groups are attached to the surfaces of both said objects to be bonded. This atomically attaches active oxygen ions having

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<sup>1</sup> "The object of the present invention is therefore to provide a method and apparatus for direct bonding of two materials in a vacuum at room temperature under a low pressure without heating." (Emphasis added.)

<sup>2</sup> See top of page 3 of the Final Action.

<sup>3</sup> "a third step (bonding step) of bringing the surfaces of the bodies into contact with each other and bonding the bodies through hydrogen bonds between the hydroxide groups on the surface of the at least one body and oxygen atoms present on the surface of the other body." (Emphasis added.)

dangling bonding surfaces for the objects to be bonded, and is thus functionally different from etching used in the cleaning step of Nagakubo *et al.* '953. In fact, the cleaning by etching using the inert gas as taught by Nagakubo *et al.* '953 removes impurities from the bonding surfaces,<sup>4</sup> and is thus different from the use of oxygen in the physical treatment step of the amended Claim 1.

- d. In the second half of the surface activation step, a chemical treatment with reduced ion strike force to thereby efficiently promote adhesion of the OH groups. This causes active oxygen ions adhere to the bonding surfaces, thereby generating dangling bonds. As a result, activation of the bonding surfaces can be maintained for a relatively long time, thus allowing physical and chemical treatment of amended Claim 1 to be performed even in a low vacuum. By contrast, the dangling bonds of Nagakubo *et al.* '953 are generated by etching bonding surfaces using an inert gas such as argon (Ar), so that the activated state of the bonding surfaces cannot be maintained for as long a time.<sup>5</sup>

Because remaining pending Claims 3 through 5, 7, 12, and 16 through 18 ultimately depend from amended Claim 1, these remaining Claims are novel over Nagakubo *et al.* '953 for the same reasons why amended Claim 1 are novel over Nagakubo *et al.* '953.

For at least the foregoing reasons, Claims 1, 3 through 5, 7, 12, and 16 through 18, as amended or as currently presented, are novel over Nagakubo *et al.* '953.

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<sup>4</sup> See column 2, lines 54-58, of Nagakubo *et al.* '953.

<sup>5</sup> See column 7, lines 54-61, of Nagakubo *et al.* '953.

**D. Response to Rejection of Claims 1, 3 through 5, 7, 12, and 16 through 18 under 35 U.S.C. § 103(a) as Unpatentable over Nagakubo et al., in view of Xu et al., or Vasudev et al.**

At page 5 of the Office Action, pending Claims 1, 3 through 5, 7, 12, and 16 through 18 have also been rejected under 35 U.S.C. 103(a) as being unpatentable over Nagakubo *et al.* ‘953 in view of U.S. Patent No. 6,749,729 (Xu *et al.*), or U.S. Patent 5,418,095 (Vasudev *et al.*). This rejection is respectfully traversed with respect to these Claims, as amended or as currently presented, for at least the following reasons.

In rejecting these Claims as unpatentable over Nagakubo *et al.* ‘953 in view of Xu *et al.*, or Vasudev *et al.*, the Final Action makes the following allegation:

*Allegation 1:* As noted above, Nagakubo [et al. ‘953] teach the physical treatment step includes an ionized gas, e.g.[.] argon, having a strong ion strike force such that because plasma is known as a highly ionize gas, e.g.[.] see American Heritage Dictionary definition of plasma as evidence, Nagakubo [et al. ‘953] is considered to teach “a physical treatment step of subjecting both said objects to be bonded to a physical treatment using said plasma having a strong ion strike force”. In the event it is shown the ion etching/sputter etching with ionized argon taught by Nagakubo [et al. ‘953] is not necessarily plasma the following rejection would apply, it being noted that Nagakubo [et al. ‘953] not limited to ion etching/sputter etching with any particular means. It is considered well known in the art that ion etching/sputter etching with ionized argon is performed using a plasma treatment source as shown by Xu [et al.] (Column 3, lines 1-2) or Vasudev [et al.] (Column 4, lines 53-54). It would have been obvious to one of ordinary skill in the art at the time the invention was made to perform the ion etching/sputter etching with ionized argon taught by Nagakubo [et al. ‘953] using a plasma treatment source as was a well known suitable means as shown by Xu [et al.] or Vasudev [et al.].

Allegation 1 does not properly support the rejection of Claims 1, 3 through 5, 7, 12, and 16 through 18, as amended or as currently presented, under 35 U.S.C. § 103(a) as unpatentable

over Nagakubo *et al.* ‘953 in view of Xu *et al.*, or Vasudev *et al.* because the combined disclosures of these references do not teach or suggest all of the features/elements of the claimed invention. In determining patentability under 35 U.S.C. §103(a) over the art (*i.e.*, the references relied upon in Allegation 1), all of the claim limitations (*e.g.*, claim elements, features, *etc.*) must be considered.<sup>6</sup>

All of the elements/features of Claims 1, 3 through 5, 7, 12, and 16 through 18, as amended or as currently presented, are not taught or suggested by Nagakubo *et al.* ‘953 for reasons previously presented in Section C in response to the rejection of these Claims as anticipated by Nagakubo *et al.* ‘953. Nor does Allegation 1 suggest that Xu *et al.*, or Vasudev *et al.* supply these elements/features missing from the teachings of Nagakubo *et al.* ‘953. In other words, this rejection of Claims 1, 3 through 5, 7, 12, and 16 through 18, as amended or as currently presented, under 35 U.S.C. § 103(a) over Nagakubo *et al.* ‘953, in view of Xu *et al.*, or Vasudev *et al.*, fails to satisfy at least one of the criteria for obviousness, namely that the prior art references must teach or suggest all the claim limitations (*e.g.*, elements, features, *etc.*).

Allegation 1 does not properly support the rejection of Claims 1, 3 through 5, 7, 12, and 16 through 18, as amended or as currently presented, under 35 U.S.C. § 103(a) as unpatentable over Nagakubo *et al.* ‘953 in view of Xu *et al.*, or Vasudev *et al.* for an additional reason, namely Allegation 1 provides no properly alleged basis for combining the teachings of Xu *et al.*, or Vasudev *et al.*, with those of ‘Nagakubo *et al.* ‘953 with respect to these Claims. To properly combine the teachings of Xu *et al.*, or Vasudev *et al.* with those of ‘Nagakubo *et al.* ‘953, the Final Action must allege some proper motivation for one skilled in the art to do so.<sup>7</sup> “Obviousness can only be established by combining or modifying the teachings of the prior art to produce the claimed invention where there is some teaching, suggestion, or motivation to do so found either in the prior art references themselves or in the knowledge generally available to one of ordinary skill in the art. This requirement is designed to protect against the tendency of using the Applicant’s disclosure in hindsight to pick and choose among isolated disclosures in the prior art to depreciate the claimed invention.”<sup>8</sup>

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<sup>6</sup> See *In re Lowry*, 32 USPQ2d 1031, 1034 (Fed. Cir. 1994).

<sup>7</sup> See *In re Fine*, 5 USPQ2d 1596, 1599 (Fed. Cir. 1988); *In re Kahn*, 78 U.S.P.Q.2d 1329, 1336 (Fed. Cir. 2006).

<sup>8</sup> See *In re Fine*, 5 USPQ2d 1596 (Fed. Cir. 1988) and *In re Jones*, 21 USPQ2d 1941 (Fed. Cir. 1992) cited with approval by MPEP § 707.07(I) (emphasis added).

In addition, “[a] proper analysis under 35 U.S.C. § 103 requires, inter alia, a consideration of two factors: (1) whether the prior art would have suggested to those of ordinary skill in the art that they should make the claimed invention; and (2) whether the prior art would have revealed that in so making or carrying out, those of ordinary skill would have a reasonable expectation of success; both the suggestion and reasonable expectation of success must be founded in the prior art, not the applicant’s disclosure.”<sup>9</sup> The suggestion, teaching or motivation to combine may be implicit or explicit.<sup>10</sup> But “[r]ejections on obviousness grounds cannot be sustained by mere conclusory statements; instead there must be some articulated reasoning with some rational underpinning to support the legal conclusion obviousness.”<sup>11</sup>

Allegation 1 simply makes the conclusory statement that it “is considered well known in the art that ion etching/sputter etching with ionized argon is performed using a plasma treatment source as shown by Xu [et al.] (Column 3, lines 1-2) or Vasudev [et al.] (Column 4, lines 53-54).” But the cited portion of Xu *et al.* relied upon by Allegation 1<sup>12</sup> simply teaches that a plasma treatment source may include sputter/ion etching, not that sputter/ion etching, as taught by Nagakubo et al. ‘953 must necessarily be carried out as a plasma treatment. Also, the cited portion Vasudev *et al.* relied upon by Allegation 1<sup>13</sup> simply teaches that etching techniques may include sputter etch in argon plasma, not that sputter/ion etching, as taught by Nagakubo et al. ‘953 must necessarily be carried out as a plasma treatment. Accordingly, because Nagakubo *et al.* ‘953 does not characterize sputter/ion etching as a “plasma treatment,” Allegation 1 provides no properly alleged basis or “motivation” for combining the teachings of Xu *et al.* or Vasudev *et al.* with those of Nagakubo *et al.* ‘953.

In fact, because Allegation 1 fails to provide a proper “motivation” for combining the teachings of Xu *et al.* or Vasudev *et al.* with those of Nagakubo *et al.* ‘953, it appears that Allegation 1 is based, at least partially, on facts within the personal knowledge of the Examiner that have not been provided to the Applicants. Accordingly, if the Examiner wishes to persist in

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<sup>9</sup> See *In re Vaeck*, 20 USPQ2d 1438, 1442-44 (Fed. Cir. 1991) (emphasis in original).

<sup>10</sup> See e.g., *In re Kahn*, 78 U.S.P.Q.2d 1329, 1336 (Fed. Cir. 2006) (“A suggestion, teaching, or motivation to combine the relevant prior art teachings does not have to be found explicitly in the prior art, as the teaching, motivation, or suggestion may be implicit from the prior art as a whole, rather than expressly stated by the references....”).

<sup>11</sup> See e.g., *In re Kahn*, 78 U.S.P.Q.2d at 1336 (emphasis added).

<sup>12</sup> “among a variety of plasma treatment sources, such as sputter/ion etching, hydrogen, nitrogen, oxygen, argon, etc., plasma sources for performing simultaneous treatment of”

<sup>13</sup> “Finally, a subsequent etching technique, such as a sputter etch in argon (Ar.sup.+) plasma”

this rejection under U.S.C. § 103(a) of Claims 1, 3 through 5, 7, 12, and 16 through 18, as amended or as currently presented, Applicant respectfully requests that he provide an affidavit/declaration under 37 CFR § 1.104(d)(2)<sup>14</sup> because Allegation 1 appears to be based, at least partially, on facts within the Examiner's personal knowledge that have not been provided to the Applicants, and which are not fairly taught or suggested by Xu *et al.*, Vasudev *et al.*, and/or Nagakubo *et al.* '953.

In rejecting Claim 16 as unpatentable over Nagakubo *et al.* '953 in view of Xu *et al.*, or Vasudev *et al.*, the Final Action makes the following additional allegation:

***Allegation 2:*** Regarding claim 16, in the event that it is shown that Nagakubo [et al. '953] does not necessarily suggest applying a voltage and heating during bonding in combination the following rejection would apply. It would have been obvious to one of ordinary skill in the art to include in Nagakubo [et al. '953] (or Nagakubo [et al. '953] as modified by Xu [et al.] or Vasudev [et al.] a step of both applying voltage and heating during bonding as both were suggested by Nagakubo [et al. '953] for removing any water between the objects and to form a firm bond.

Allegation 2 does not further properly support the rejection of Claim 16 under 35 U.S.C. § 103(a) as unpatentable over Nagakubo *et al.* '953 in view of Xu *et al.*, or Vasudev *et al.* because Allegation 2 overstates what Nagakubo *et al.* '953 fairly teaches or even suggests regarding heating during bonding of the objects and is also inconsistent with why the Final Action considers Claim 16 to be anticipated Nagakubo *et al.* '953. As previously pointed out in Section C in response to the rejection of Claims 1, 3 through 5, 7, 12, and 16 through 18 as

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<sup>14</sup> See 37 CFR § 1.104(d)(2) which states: "When a rejection in an application is based on facts within the personal knowledge of an employee of the Office, the data shall be as specific as possible, and the reference must be supported, when called for by the applicant, by the affidavit of such employee, and such affidavit shall be subject to contradiction or explanation by the affidavits of the applicant and other persons." Applicant also notes that in the unpublished case of *In re Sun*, 31 USPQ2d 1451, 1455 (Fed. Cir. 1993), the USPTO argued "the procedures established by 37 C.F.R. Section 1.107(b) (1993) [now 37 CFR § 1.104(d)(2)] *expressly entitle* an Applicant, on mere request, to an examiner affidavit that provides [citations that support the Examiner's asserted level of skill in the art]" (emphasis added). Furthermore, in *In re Sun*, the Federal Circuit, held that "this procedure, so readily available, helps save the lack of citation in an office action from possible constitutional infirmity in denying reasonable notice and hence due process." See 31 USPQ2d at 1455.

anticipated by Nagakubo *et al.* '953, the Final Action relies upon Nagakubo *et al.* '953<sup>15</sup> to allegedly teach that "the objects may be bonded together at room temperature without heating." In other words, Nagakubo *et al.* '953 specifically teaches away from heating the objects after the surface activation step according to amended Claim 1, as well as to Claim 16 from which depends from Claim 1.

The Final Action cannot have it both ways by relying upon Nagakubo *et al.* '953 to teach bonding the objects without heating, but then arguing, as Allegation 2 does, that "applying voltage and heating during bonding" is suggested by Nagakubo *et al.* '953. In fact, because Allegation 2 takes mutually inconsistent positions with regard to what Nagakubo *et al.* '953 teaches with regard to Claim 16, it appears that Allegation 2 is based, at least partially, on facts within the personal knowledge of the Examiner that have not been provided to the Applicants. Accordingly, if the Examiner wishes to persist in the position taken in Allegation 2 with regard to Claim 16, Applicant respectfully requests that he provide an affidavit/declaration under 37 CFR § 1.104(d)(2)<sup>16</sup> because Allegation 2 appears to be based, at least partially, on facts within the Examiner's personal knowledge that have not been provided to the Applicants, and which are not fairly taught or suggested by Nagakubo *et al.* '953.

For at least the foregoing reasons, Claims 1, 3 through 5, 7, 12, and 16 through 18, as amended or as currently presented, are unobvious over Nagakubo *et al.* '953, even in view of in view of Xu *et al.*, or Vasudev *et al.*

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<sup>15</sup> See top of page 3 of the Final Action.

<sup>16</sup> See 37 CFR § 1.104(d)(2) which states: "When a rejection in an application is based on facts within the personal knowledge of an employee of the Office, the data shall be as specific as possible, and the reference must be supported, when called for by the applicant, by the affidavit of such employee, and such affidavit shall be subject to contradiction or explanation by the affidavits of the applicant and other persons." Applicant again notes that in the unpublished case of *In re Sun*, 31 USPQ2d 1451, 1455 (Fed. Cir. 1993), the USPTO argued "the procedures established by 37 C.F.R. Section 1.107(b) (1993) [now 37 CFR § 1.104(d)(2)] *expressly entitle* an Applicant, on mere request, to an examiner affidavit that provides [citations that support the Examiner's asserted level of skill in the art]" (emphasis added). Furthermore, in *In re Sun*, the Federal Circuit, held that "this procedure, so readily available, helps save the lack of citation in an office action from possible constitutional infirmity in denying reasonable notice and hence due process." See 31 USPQ2d at 1455.

**E. Response to Rejection of Claims 14 and 15 as Being Unpatentable over Nagakubo *et al.* ‘953, and Xu *et al.*, or Vasudev *et al.*, and further in view of Goel *et al.* and Kobavashi *et al.***

At page 6 of the Office Action, Claims 14 and 15 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Nagakubo *et al.* ‘953 (or Nagakubo *et al.* ‘953 and Xu *et al.* or Vasudev *et al.*) as applied to pending Claims 1, 3 through 5, 7, 12 and 16 through 18, and further in view of U.S. Patent No. 6,486,597 (Goel *et al.*) and U.S. Patent No. 6,512,562 (Kobayashi *et al.*). This rejection is respectfully traversed with respect to Claims 14 and 15, as currently presented, for at least the following reasons.

In rejecting Claims 14 and 15 as unpatentable over Nagakubo *et al.* ‘953 (or Nagakubo *et al.* ‘953 and Xu *et al.* or Vasudev *et al.*) as applied to pending Claims 1, 3 through 5, 7, 12 and 16 through 18, and further in view of Goel *et al.* and Kobayashi *et al.*, the Final Action makes the following allegation:

*Allegation 3:* Nagakubo [et al. ‘953] (or Nagakubo [et al. ‘953] and Xu [et al.] or Vasudev [et al.]) as applied above teaches all of the limitations in claims 14 and 15 except for a specific teaching of including oxygen gas with the argon gas in the physical treatment step and including nitrogen gas with the oxygen gas in the chemical treatment step, it being noted [that] Nagakubo [et al. ‘953] is not limited to any particular gases for either step. It is known in argon ion etching to include oxygen gas to improve the efficiency and adhesive properties as shown by Goel [et al.] (Column 6, lines 59-65), and further it was known to include in a reaction gas for a chemical treatment step of forming hydroxyl groups to include nitrogen gas, oxygen gas, hydrogen gas, etc.[.] to improve the adhesive properties as shown by Kobayashi [et al.] (Column 8, lines 20-34). It would have been obvious to one of ordinary skill in the art at the time the invention was made to include oxygen gas in the physical treatment step and nitrogen gas in the chemical treatment step taught by Nagakubo [et al. ‘953] (or Nagakubo [et al. ‘953] as modified by Xu [et al.] or Vasudev [et al.]) for reasons such as improving the efficiency of the step and adhesive properties as shown by Goel [et al.] and Kobayashi [et al.].

Allegation 3 does not properly support the rejection of Claims 14 and 15 for reasons previously presented in response to Allegation 1 as to why pending Claims 1, 3 through 5, 7, 12, and 16 through 18, as amended or as currently presented, are unobvious over Nagakubo *et al.* '953, even in view of in view of Xu *et al.*, or Vasudev *et al.* Allegation 3 does not properly support the rejection of Claims 14 and 15 for an additional reason, namely, Allegation 3 provides no properly alleged basis for combining the teachings of Goel *et al.*, and/or Kobayashi *et al.*, with those of 'Xu *et al.*, or Vasudev *et al.*, and/or Nagakubo *et al.* '953 with respect to Claims 14 and 15. See corresponding response to Allegation 1 and case law cited therein for why there is no proper "motivation" to combine Xu *et al.*, or Vasudev *et al.* with Nagakubo *et al.* '953. Allegation 3 simply makes the conclusory statement that it would be obvious "to include oxygen gas in the physical treatment step and nitrogen gas in the chemical treatment step taught by Nagakubo [et al. '953] (or Nagakubo [et al. '953] as modified by Xu [et al.] or Vasudev [et al.])" to improve "the efficiency of the step and adhesive properties as shown by Goel [et al.] and Kobayashi [et al.]" But neither Goel *et al.*, nor Kobayashi *et al.*, are directed at processes for bonding objects according to Nagakubo *et al.* '953, much less according to the method of Claims 14 and 15.

Instead, as shown by the cited portion of Goel *et al.* relied upon by Allegation 3,<sup>17</sup> Goel *et al.* is directed at improving the adhesion of a diamond-like carbon containing material to a substrate. As shown by the cited portion of Kobayashi *et al.* relied upon by Allegation 3,<sup>18</sup> Kobayashi *et al.* is directed at improving the adhesion of a protective film to a polarizing plate. It would be sheer coincidence for one of ordinary skill in the art to consider the teachings of Goel *et al.* and/or Kobayashi *et al.* relevant to the bonding process of Nagakubo *et al.* '953, much less

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<sup>17</sup> "In addition to argon ion etching, other plasma cleaning can be performed by the introduction of small amounts of oxygen gas in addition to the argon gas. This process has been found to efficiently remove hydrocarbon contamination, oxide layers, and other contaminants, as well as improving the adhesion of coatings deposited on some substrates."

<sup>18</sup> "After carrying out the plasma treatment under conditions in which the C-C bond or C-H bond of organic substances on the film surface is broken, the plasma treatment is preferably carried out under conditions in which hydroxyl groups or amino groups are formed on the film surface. By so doing, it is possible to introduce more hydroxyl groups or amino groups and to obtain the film which exhibits better adhesive properties. Specifically, the plasma treatment is preferably carried out in the presence of at least two types of gases selected from inert gases, such as argon, neon, and the like, hydrogen, oxygen, ozone, water vapor, carbon dioxide, carbon monoxide, nitrogen, ammonia, nitrogen monoxide, nitrogen dioxide, lower hydrocarbons such as methane, ethane, and the like, low boiling point organic compounds such as ketone, alcohol, and the like."

be “motivated” to combine the teachings of Goel *et al.* and/or Kobayashi *et al.* with those of Nagakubo *et al.* ‘953 according to the method of Claims 14 and 15. In sum, Allegation 3 provides no properly alleged basis or “motivation” for combining the teachings of Goel *et al.* and/or Kobayashi *et al.* those of ‘Xu *et al.*, or Vasudev *et al.*, and/or Nagakubo *et al.* ‘953 with respect to Claims 14 and 15.

In fact, because Allegation 3 fails to provide a proper “motivation” for combining the teachings of Goel *et al.* and/or Kobayashi *et al.* those of ‘Xu *et al.*, or Vasudev *et al.*, and/or Nagakubo *et al.* ‘953 with respect to Claims 14 and 15, it appears that Allegation 3 is based, at least partially, on facts within the personal knowledge of the Examiner that have not been provided to the Applicants. Accordingly, if the Examiner wishes to persist in this rejection under U.S.C. § 103(a) of Claims 14 and 15, , Applicant respectfully requests that he provide an affidavit/declaration under 37 CFR § 1.104(d)(2)<sup>19</sup> because Allegation 3 appears to be based, at least partially, on facts within the Examiner’s personal knowledge that have not been provided to the Applicants, and which are not fairly taught or suggested by Goel *et al.*, Kobayashi *et al.*, Xu *et al.*, Vasudev *et al.*, and/or Nagakubo *et al.* ‘953.

For at least the foregoing reasons, Claims 14 and 15, as currently presented, are unobvious over Nagakubo *et al.* ‘953 (or Nagakubo *et al.* ‘953 and Xu *et al.* or Vasudev *et al.*), even further in view of Goel *et al.* and Kobayashi *et al.*

#### **F. Conclusion**

Claims 1, 3 through 5, 7, 12, and 14 through 18, as amended or as currently presented, are unobvious over the art relied on in the Final Action. Accordingly, 1, 3 through 5, 7, 12, and 14 through 18, as amended or as currently presented, are in condition for allowance and favorable action is earnest solicited thereon.

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<sup>19</sup> See 37 CFR § 1.104(d)(2) which states: “When a rejection in an application is based on facts within the personal knowledge of an employee of the Office, the data shall be as specific as possible, and the reference must be supported, when called for by the applicant, by the affidavit of such employee, and such affidavit shall be subject to contradiction or explanation by the affidavits of the applicant and other persons.” Applicant again notes that in the unpublished case of *In re Sun*, 31 USPQ2d 1451, 1455 (Fed. Cir. 1993), the USPTO argued “the procedures established by 37 C.F.R. Section 1.107(b) (1993) [now 37 CFR § 1.104(d)(2)] *expressly entitle* an Applicant, on mere request, to an examiner affidavit that provides [citations that support the Examiner’s asserted level of skill in the art]” (emphasis added). Furthermore, in *In re Sun*, the Federal Circuit, held that “this procedure, so readily available, helps save the lack of citation in an office action from possible constitutional infirmity in denying reasonable notice and hence due process.” See 31 USPQ2d at 1455.

Applicant respectfully requests prompt issuance of a Notice of Allowance or an Advisory Action by the Examiner. Applicant's representative, Ajay A. Jagtiani, also respectfully requests a telephone conference in the event the Examiner has any questions, comments or suggestions that would place any pending claim not in allowable form in better condition for allowance. Applicant's representative may be reached directly at 703-591-2664, Ext. 2001.

The Commission is hereby authorized by this paper to charge any fees during the entire pendency of this application including fees due under 37 C.F.R. §§ 1.16 and 1.17 which may be required, including any required extension of time fees, or credit any overpayment to Deposit Account **10-0233-YANE-0004-US1**.

Respectfully submitted,

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